

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012797**Date Inspected:** 25-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2130**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Contents in Report**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girders**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the E1/E2 and E2/E3 field splices:

A). Welding of the Field Splice E1 to E2.

A) Field Splice E1/E2, WN: 1E-2E-D

The QAI observed the automated FCAW-G welding process during the CJP welding of the bottom plate field splice performed by Rory Hogan ID-3186 and Jeremy Dolman ID-5042. The welders utilized the FCAW-G welding process as per the WPS ABF-WPS-D15-3040A-4 Rev. 0 which was also used as a reference by the QC inspector Bernie Docena to verify the welding parameters and the surface temperatures. The DCEP welding parameters were verified and noted by the QC inspector and were noted as follows: 256 amps, 23.2 volts and a travel speed measured at 195mm/minute. The minimum preheat temperature of 65 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius were maintained. The welding operators continued to experience porosity during the CJP welding and additional grinding was performed to remove the porosity prior to the welding of subsequent passes. The welding was terminated at approximately 1715 and the contractor, AB/F, has elected to leave the heating bands on the weld joint continuously which was verified by the QAI, at the time the welding was terminated. The welding will resume on the next scheduled shift, 03/26/10.

The QAI also observed the removal of the backing bar and the back gouging of the side plate field splice identified

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as WN: 1E-2E-C. The back gouging was performed by Salvador Sandoval ID-2202 utilizing the plasma arc cutting process.

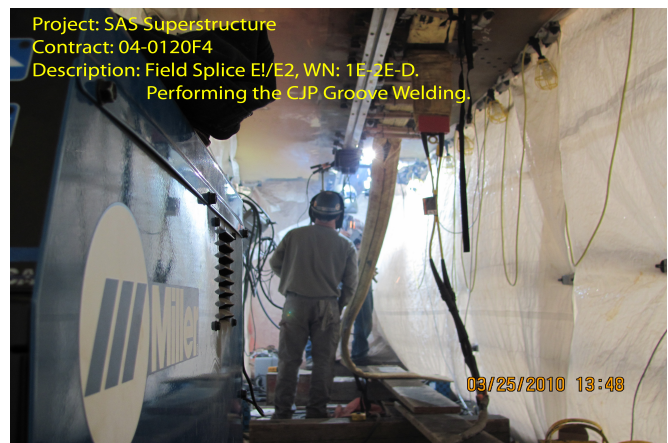
QA Observation and Verification Summary

The QA inspector observed the QC activities and the welding of the E1/E2 field splices utilizing the WPS as noted above, which appeared to be posted at the weld station. The welding parameters and surface temperatures were verified by the QC inspector's and utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. The 1.4 mm diameter consumables identified as ESAB Dual Shield 70 Ultra Plus was utilized during the FCAW-G welding of the CJP groove welds and appeared to be in compliance with the AWS Specification A5.20 and the AWS Classification E71T-1M. The QC inspection, testing and welding performed on this shift was not completed, except as noted above, appeared to be in general compliance with the contract documents. The QAI randomly verified the QC inspection, testing, welding parameters and the surface temperatures utilizing various inspection equipment and gages, a Fluke 337 Clamp Meter and Tempilstik Temperature indicators.

The QAI also performed a random ultrasonic verification test of the Complete Joint Penetration (CJP)groove weld identified as WN: 1E-2E-F, Weld Segment F1, WN: 2E-3E-B, Segment B1 and WN: 2E-3E-F, Segment F1. A total area of approximately 10% was ultrasonically tested to verify the weld and testing by QC meet the requirements of the contract documents. The examination was performed in the first and second leg and a ultrasonic test report, TL6027, was generated on this date.

The QAI also performed a random MPT verification test of the Complete Joint Penetration (CJP)groove weld identified as WN: 1E-2E-F, Weld Segment F1, WN: 2E-3E-B, Segment B1 and WN: 2E-3E-F, Segment F1. A total area of approximately 10% was tested to verify the weld and testing performed by QC meet the requirements of the contract documents. The QAI performed the test in two (2) directions (longitudinal and transverse axis)during the performance of the QAI MPT verification. An Magnetic Particle Test report, TL6028, was generated on this date.

The digital photographs below illustrate the work observed during this scheduled shift.



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Summary of Conversations:

There were no pertinent conversations discussed in regards to the project except as noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
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Reviewed By:	Levell,Bill	QA Reviewer
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